

DT04 Rec'd PCT/PTO 29 SEP 2004

In the claims

The following amendments are made with respect to the claims in the international application PCT/GB03/01488.

This listing of claims will replace all prior versions and listings of claims in this application.

1 (Original). A sensor for the detection of an analyte, which comprises a holographic element comprising a medium and a hologram disposed throughout the volume of the medium, wherein an optical characteristic of the hologram changes as a result of a variation of a physical property occurring throughout the volume of the medium, wherein the medium is obtainable by formation *in situ* in the presence of a pore-forming agent, wherein the agent is not present in the sensor or does not react with the analyte and the sensor.

2 (Currently amended). ~~A~~The sensor according to claim 1, wherein the physical property is the size of the medium.

3 (Currently amended). ~~A~~The sensor according to claim 1 ~~or claim 2~~, wherein the optical characteristic is the reflectance, refractance or absorbance of the holographic element.

4 (Currently amended). ~~A~~The sensor according to ~~any preceding claim~~ 1, wherein the agent is a gas.

5 (Currently amended). ~~A~~The sensor according to ~~any of claims 1 to 3~~ claim 1, wherein the agent is a liquid.

6 (Currently amended). ~~A~~The sensor according to ~~any preceding~~ claim 1, wherein the agent is water.

7 (Currently amended). ~~A~~The sensor according to ~~any of claims 1 to 3~~ claim 1, wherein the agent is a solid obtainable by extraction of the agent after the formation.

8 (Currently amended). ~~A~~The sensor according to ~~any preceding~~ claim 1, wherein the medium is a polymer obtainable by the polymerization of monomers *in situ*.

9 (Currently amended). ~~A~~The sensor according to claim 8, wherein the monomers include hydroxyethyl methacrylate.